Ankle Malunions
Supramalleolar Deformity

S. Robert Rozbruch, MD
Chief, Limb Lengthening & Complex Reconstruction Service
Professor of Clinical Orthopedic Surgery
The Ilizarov Method

- Address all facets of deformity including length
- Gradual correction
  - Less traumatic
  - Patient feedback for position
  - Less risk of NV insult
- Minimally invasive exposure
- Weight bearing is allowed
Tibia malunion, LLD 6cm, BEFORE
Postop, Double level osteotomy

2 separate programs
Independent of each other
4 months
lengthening

Deformity correction

after
- Malunion (tibial deformity)
- Nonunion with deformity
- Supramalleolar bone loss
- Altered malleolar relationship
Associated issues

- Ankle contracture
- Hindfoot contracture
- Arthritis of ankle and hindfoot
- Proximal tibial deformity
- LLD
Hindfoot and ankle VALGUS

External Rotation
Normal femur, distal tibia varus

Use extension of femur mech axis for proximal tibia mech. axis
Osteotomy principle

Gain length

Loose length
Supramalleolar zone pin and wire placement
Diaphyseal level
Be aware of foot compensation and determine if it is flexible or fixed

Varus tibia compensated with Hindfoot eversion and Forefoot pronation

Greater compensation Possible for valgus tibia

Valgus tibia compensated with Hindfoot inversion and Forefoot supination
18-10a
Opening Wedge

i

LDTA = 70°

ii

LDTA = 90°

iii

20°

© Springer-Verlag Berlin Heidelberg 2003
Intra-articular nonunion
Thank You

LIMB LENGTHENING.COM

www.hss.edu/limblengthening